Virginia Department of Environmental Quality

Air Division

Office of Air Permit Programs

Annual Report for Fiscal Year 2003

(July 1, 2002 through June 30, 2003)

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I. Introduction: Permit Program Description and Overview

A. Overview of Air Permitting in Virginia

The federal Clean Air Act (CAA) and the Virginia Air Pollution Control Law authorize the establishment and administration of air emissions permitting programs as tools to achieve, maintain, and prevent deterioration of air quality that meets National Ambient Air Quality Standards (NAAQS) for criteria pollutants.[1] These laws also authorize permitting to regulate the emissions of hazardous air pollutants (HAPs).

Under the auspices of the State Air Pollution Control Board, the Virginia Department of Environmental Quality (DEQ) issues several different types of air emissions permits that regulate the construction and operation of certain stationary sources of air pollution.[2] These permits include:

- ***Minor New or Modified Source Construction Permits (Minor NSR Permits)***, which are required prior to the construction, modification, relocation, or reactivation of non-exempted minor stationary air pollution sources and major sources not subject to nonattainment area or Prevention of Significant Deterioration (PSD) permit requirements.[3]

- ***Major New or Modified Source Construction Permits in Nonattainment Areas (NA Permits)***, which are required prior to the construction, modification, relocation, or reactivation of major air pollution sources in areas that do not attain the NAAQS.[4]

- ***Prevention of Significant Deterioration Permits (PSD Permits)***, which are required prior to construction, modification, relocation, or reactivation of major air pollutant sources located in areas that do attain the NAAQS.[5]

- ***Title V Federal Operating Permits***, which are required to operate major stationary sources of air pollution.

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[1] NAAQS provides health-based standards for six criteria pollutants--carbon monoxide, lead, nitrogen oxides, ozone, particulate matter, and sulfur oxides. As a precursor to formation of ozone, volatile organic compounds (VOCs) are also regulated in order to achieve NAAQS.

[2] Virginia's Environmental Permit Guide provides additional descriptions of applicability, requirements, procedures, and authority for DEQ air, water, and waste permits as well as environmental permitting programs of the Virginia Marine Resources Commission and Department of Agriculture and Consumer Services. The guide is available online at http://www.deq.state.va.us/pdf/general/bizguide.pdf. More detailed information on DEQ air permitting requirements and procedures (including public comment and hearing provisions) can be obtained at http://www.deq.state.va.us/air/permitting/homepage.html or by contacting DEQ regional office air permitting staff.

[3, 4, 5] In addition to authorizing construction, modification, reconstruction, or relocation of pertinent air pollution sources, these permits also authorize operation. Minor NSR, NA, and PSD permits are all forms of NSR permitting.

- ***Title IV Acid Rain Permits***, which are applicable to fossil fueled, electricity grid-connected electrical generating units that are subject to provisions of Title IV of the CAA.

- ***State Operating Permits (SOPs)***, which are used to create enforceable permit conditions on stationary source facilities that elect to operate below major source thresholds but would otherwise be subject to federal Title V provisions. SOPs are also used for consolidating multiple minor source air permits at a facility and for imposing source-specific emission standards under certain circumstances.

During state fiscal year[6] (FY) 2003 DEQ began a ***general permitting*** program to cover the construction and operation of certain minor air pollution sources under Minor NSR provisions. General permits regulate and provide streamlined permitting procedures for standardized operations that do not require case-by-case analysis. Certain nonmetallic mineral processing operations are eligible for general air permitting in Virginia. DEQ may develop other general air permit categories in the future.

B. Permitting Activity

There are several types of permit processing actions. These include:

- Issuance of a new permit,
- Significant amendment of an existing permit,
- Minor amendment of an existing permit,
- Administrative amendment of an existing permit, and
- Denial of a new permit or permit amendment.

DEQ also writes exemption letters for sources wishing official confirmation that an air permit is not required for a particular operation or emissions unit. Another type of action is withdrawal of a permit application or amendment request.

Table 1 summarizes DEQ air permitting actions for the past three years. Figure 1 depicts in graphical form permits and permit amendments issued during those same years. Table 2 shows permits and permit amendments issued by each DEQ regional office; exemption letters, denials, and withdrawals are not included in the tally.

Table 1. Summary of DEQ Air Permitting Actions

FY	Permits Issued	Significant Amendments	Minor Amendments	Administrative Amendments	Exemptions	Denials	Withdrawals
2001	425	21	86	117	317	0	67
2002	538	27	91	99	265	2	82
2003	484	77	126	86	297	1	93

[6] The state fiscal year runs from July 1 through June 30.

Figure 1. Permits and Permit Amendments Issued

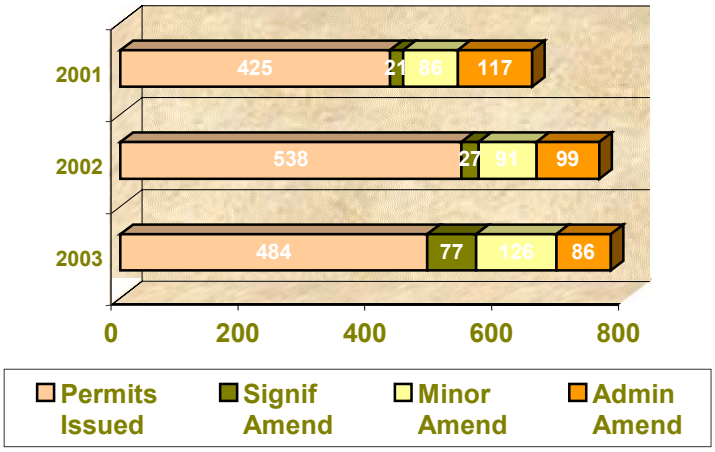


Table 2. Permits and Permit Amendments Issued by Regional Office*

REGION / FY	NVRO	PRO	SCRO	SWRO	TRO	VRO	WCRO	Total Permits & Amendments Issued
2001	71	161	62	114	87	72	82	649
2002	71	189	78	136	116	75	90	755
2003	65	178	85	144	122	96	83	773

* NVRO--Northern Virginia Regional Office, includes Fredericksburg Satellite Office
PRO--Piedmont Regional Office
SCRO--South Central Regional Office
SWRO--South West Regional Office
TRO--Tidewater Regional Office
VRO--Valley Regional Office
WCRO--West Central Regional Office

C. Staffing

Table 3 summarizes air permitting staff and authorized positions during 2003. DEQ regional office staff process air permit applications, issue permits and permit amendments, and respond to permit-related inquiries. The Office of Air Permit Programs at the DEQ central office in Richmond supports regional office staff by:

- Providing guidance documents and interpreting laws, regulations, and policies;
- Offering technical assistance, such as performing air modeling and supporting Best Available Control Technology analyses;

- Interfacing with regulation writers and the Environmental Protection Agency (EPA); and
- Maintaining program statistics and reports.

Table 3. Air Permitting Staff Positions and Employees at the end of FY 2003

	Permit Writers*	Technical Support Staff*	Administrative and Supervisory Staff	Total Air Permitting Staff
Regional Offices	60 (65)		10	70
Central Office		9 (9)	3	12
Total	60 (65)	9 (9)	13	82

*Authorized positions in parentheses.

II. Clean Air Act Title V Federal Operating Permit Program

A. Program Description

A Title V Federal Operating Permit is required for all major stationary sources of regulated air pollutants.[7] Among major sources are those emitting or with potential to emit at least 10 tons per year any one HAP or 25 tons per year of a combination of HAPs as well as sources that emit or have potential to emit at least 100 tons per year any criteria pollutant. In Northern Virginia, the threshold was 50 tons per year for NOx and VOCs due to the area's "serious" nonattainment status for the ozone NAAQS. Northern Virginia's major source threshold for these pollutants was lowered to 25 tons per year due to the March 2003 redesignation of the area as "severe" nonattainment. Also, some other areas of the Commonwealth may be redesignated as nonattainment. (See additional discussion in the Issues in Air Permitting section of this report.)

Title V permitting is a relatively new program still in its first-round permit phase, during which 303 existing major sources applied for their initial Title V permits even as new major sources are entering the Title V process.[8] Federal deadlines call for all 303 of the "initial batch" of Title V permit applicants to be permitted by December 1, 2003.

[7] Major sources are defined at 9 VAC 5-80-60 C. There are some differences between the definitions of major sources under the Title V Federal Operating Permit program and the NSR permit programs. Also, there are several complexities in the definitions, including whether fugitive and insignificant source potential to emit should be included in determining whether a facility meets the major source threshold.

[8] Actually there were approximately 340 initial batch applicants, however a number of applications were withdrawn and other sources accepted enforceable limitations on operations to qualify themselves as "synthetic minor" sources under the State Operating Permit program.

B. Permitting Activity

By the end of FY 2003, DEQ had issued 241 Title V permits for the initial batch of 303 applicants, or about 80 percent progress. During FY 2003 DEQ issued 65 initial batch and seven other Title V permits. Table 4 summarizes the status of Title V permit activity. Table 5 shows Title V permitting actions during the past three years while Figure 2 shows how those actions were distributed by DEQ region.

Table 4. Title V Permitting Activity and Status

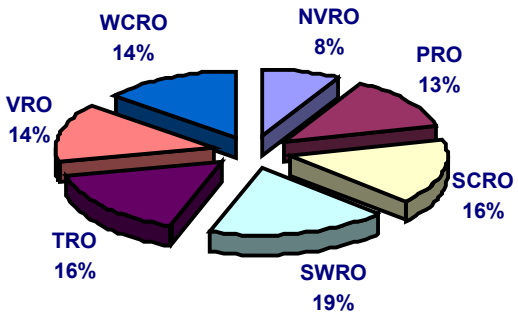
	Issued Before FY '03	Issued FY '03	Total Issued	Pending Applications on July 1, 2003
Initial Batch (303 total)	176	65	241	54*
Non-Initial Batch (including renewals)	7	7	14	18
Total	183	72	255	72

* Initial batch Title V permits issued and pending do not add up to 303 because of eight withdrawals.

Table 5. Title V Permitting Actions

FY	Permits Issued	Significant Modifications	Minor Modifications	Administrative Amendments	Reopened Permits	Total Permits and Amendments Issued
2001	46	4	4	3	1	58
2002	76	1	4	11	0	92
2003	65	13	9	12	1	100

Figure 2. Title V Permits and Permit Amendments Issued by Regional Office (Percent of total number of actions during 2001-03)



III. Minor New Source Review (NSR) Permits

A. Program Description

The Minor NSR Permitting Program is the largest air permitting program in Virginia in terms of numbers of existing permits, permit applications, permit actions taken, and regulated entities. Minor NSR Permits are required for the construction, modification, relocation, or reactivation of minor stationary air pollution sources not otherwise exempted by regulations. Also, some major sources (called "state majors") that are not subject to PSD or nonattainment area major source permitting are regulated under Minor NSR provisions.[9]

While the Minor NSR permit is considered a "pre-construction" permit (also covering modification, relocation, and reactivation), it also authorizes operation of the permitted source. The permit does not expire and so remains valid until superceded by a new NSR permit (if the source is modified, relocated, or reactivated) or an operating permit (that incorporates provisions of the NSR permit), or until the emissions units are permanently shut down and the permit is revoked.

Regulations governing the NSR program were amended September 1, 2002, with 9 VAC 5-80-1100 *et seq*. replacing 9 VAC 5-80-10 and 11. The changes are described in the Issues in Permitting section of this document.

B. Permitting Activities

Table 6 summarizes Minor NSR permits issued during FYs 2001-03 (permit amendments are not included). The data include average and maximum processing times. The table also indicates the number of permits issued within or exceeding processing time objectives.[10] This table and subsequent NSR tables and figures do not include "state major" NSR permits, of which two were issued in FY 2001, three in FY 2002, and four in FY 2003.

[9] State majors are sources that meet the state 100 ton per year threshold for major sources of criteria air pollutants but do not qualify as major sources under the PSD and nonattainment major source programs. For most source categories the federal PSD applicability threshold is 250 tons per year (28 categories have a 100 ton per year threshold).

[10] Processing time is the number of calendar days between completed application and permit issuance. For Minor NSR Permit applications that do not require a public hearing the expected processing time is 90 days or less. For applications that require public hearing the expected processing time is 180 days or less.

Table 6. Minor NSR Permitting Activity and Application Processing Time

FY	Permits Issued	* Avg. Processing Time in Days w/Hearing	** Avg. Processing Time in Days w/o Hearing	Max. Processing Time in Days w/Hearing	Max. Processing Time in Days w/o Hearing	Permits Processed in Expected Time	Permits Not Processed in Expected Time
2001	350	73	35	59	52	343	0
2002	364	69	36	79	57	352	0
2003	301	90	40	124	68	288	2

* Expectation with hearing 180 days.
** Expectation without hearing 90 days.

Figure 3. Monthly Number of Minor NSR Permits Issued (Not Including Amendments)

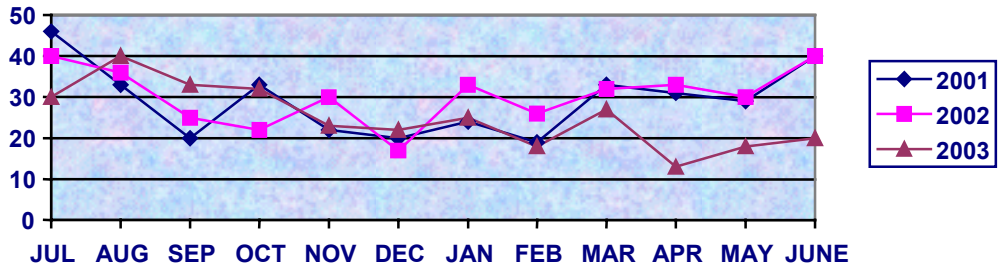
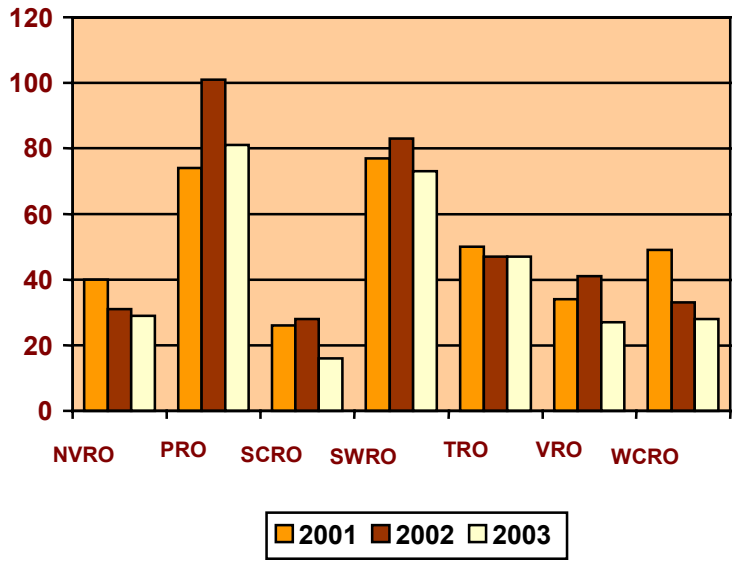


Figure 4. Aggregate Number of Minor NSR Permits Issued by Regional Office (Not Including Amendments)



IV. Nonattainment Area Major Source Permitting and Prevention of Significant Deterioration (PSD)

A. Nonattainment Permit Program

While sources subject to Minor NSR Permits generally have to meet Best Available Control Technology (BACT) levels of air pollution abatement for criteria pollutants, new and modified major sources operating in areas that do not meet the NAAQS are generally subject to more stringent Lowest Achievable Emissions Rate (LAER) standards. Furthermore, such sources are required to obtain offsetting emission reductions from other sources.

Major New or Modified Source Construction Permits for Nonattainment Areas are required of new, modified, relocated, and reactivated major stationary air pollution sources in nonattainment areas.[11] These permits also authorize operation of the source.

[11] These permits are sometimes called "PSD nonattainment" because an area that is in nonattainment for one criteria pollutant is often in attainment for other criteria pollutants. For example, a major source of both NOx and carbon monoxide (CO) may be subject to nonattainment permitting for NOx and PSD permitting for CO in an area such as Northern Virginia. This is because the area is in nonattainment for ozone (of which NOx is a precursor) but is in attainment of for CO. Also, NA and PSD permits may cover particular pollutants that are only subject to Minor NSR requirements at a particular source.

As noted previously, the major source threshold was 50 tons per year for NOx and VOCs in Northern Virginia. Redesignation of Northern Virginia as a "severe" nonattainment area for ozone in March 2003 lowered the major source threshold to 25 tons per year.

B. PSD Permit Program

The PSD program was designed into the Clean Air Act in order to prevent areas that have cleaner air than required by the NAAQS from being degraded. PSD permits apply to major stationary air pollution sources that emit at least 250 tons per year of any one or combination of regulated air pollutants, except that 28 specific industries and processes are subject to a 100 ton per year threshold.[12]

From 1998 through 2003 there has been a surge of interest in building new electric generating units (EGUs) in Virginia.[13] These proposed plants have dominated DEQ PSD permit processing in recent years. By 2001, DEQ had received 26 air permit applications for EGUs. Subsequently a number of applicants withdrew their permit applications. As of the end of FY 2003, 17 EGU projects were still considered to be active. Of these, 11 are subject to PSD permitting while the remaining six accepted permit limitations to keep their emissions below the threshold for PSD applicability. These latter facilities are termed "synthetic minors" and are subject to the Minor NSR Permit.

Table 7 indicates the status as of the end of FY 2003 of the permit applications for the 17 EGU projects cited above. Table 8 Summarizes PSD and Nonattainment permits issued during the past three years.

Table 7. Permit Status of 17 Virginia EGU Projects

	Application Review	Permit Issued, No Construction	Permit Issued, Under Construction	In Operation
Synthetic Minor NSR Permit	0	0	2	4
PSD Permit	3	5	1	2

Table 8. Summary of PSD and Nonattainment Area Major Source Permitting Activity

FY	PSD	Nonattainment	Number of Permits Issued
2001	2	0	2
2002	3	0	3
2003	6	1	7

[12] A list of the 28 industries is available at http://www.deq.state.va.us/air/permitting/xairperm.html under the PSD program description.

[13] See http://www.deq.state.va.us/air/cogens/sources.html for more information about EGUs proposed to be built in Virginia.

V. Other Air Permitting Programs

A. State Operating Permit Program

The State Operating Permit (SOP) is an elective permit issued at the request of the applicant or at the discretion of DEQ. The SOP is typically used for sources that have the potential to emit air pollution at levels that would qualify them as major sources but agree to operate their facilities in a way that keep them as minor sources. Such sources are called synthetic minors. The SOP establishes enforceable permit conditions for such sources while allowing the sources to avoid more complex procedures and conditions associated with major source PSD and Title V permitting.

The SOP can also be employed to consolidate multiple air permits at certain facilities into one operating permit. Under some circumstances it can be issued to facilitate emission trading. Also, at DEQ discretion, the SOP may be issued to cap specific sources or emissions units to remedy a violation, or to establish source-specific emission standards or other requirements.

Table 9 indicates SOP activity by DEQ regional office while Table 10 and Figure 5 summarize types of SOP actions.

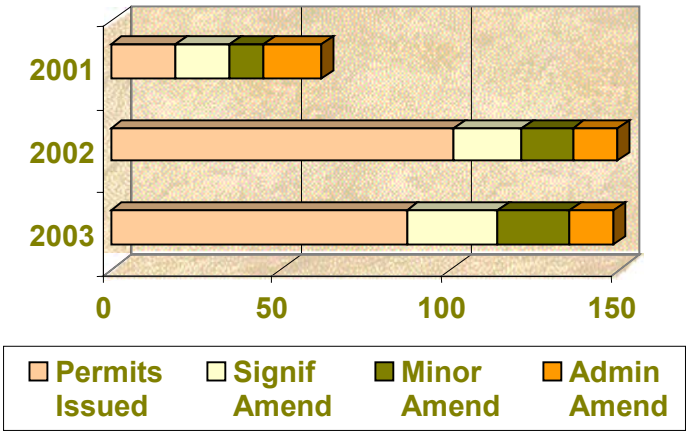
Table 9. State Operating Permitting Activity by DEQ Regional Office

Region / FY	NVRO	PRO	SCRO	SWRO	TRO	VRO	WCRO	Total Permits Issued, Including Amendments
2001	4	25	9	3	12	4	5	62
2002	12	27	15	12	49	14	20	149
2003	5	34	26	13	34	18	18	148
Total	21	86	50	28	95	36	43	359

Table 10. State Operating Permitting Activity by Type

FY	Permits Issued	Significant Amendments	Minor Amendments	Administrative Amendments	Total Permits Issued, including Amendments
2001	19	16	10	17	62
2002	101	20	15	13	149
2003	87	27	21	13	148

Figure 5. Yearly State Operating Permit Activity



The growth in SOPs issued since 2001 can be correlated with increased implementation of the Title V operating permit program. Recall that an SOP can be a means for a source with a potential to emit at major source levels to accept enforceable operational limitations that keep the source operating at minor source levels of emissions (i.e., synthetic minor). This would then allow the source to avoid the need to obtain a Title V permit.

B. Title IV Acid Rain Operating Permit Program

In accordance with Title IV of the Clean Air Act the owners of certain EGUs are subject to specific SO_2 and NO_x emission limits as well as monitoring, record keeping, and reporting requirements. Such facilities must have an Acid Rain Operating Permit. These facilities are eligible to participate in national SO_2 emissions trading as well as in the new Virginia NO_x trading program.

DEQ has the objective of incorporating Acid Rain Operating Permit provisions into the Title V Federal Operating Permit to create a single federally enforceable operating permit for pertinent air pollution sources by January 2008.

Under the Title IV program 11 Phase II Acid Rain Permits initially issued during calendar years 1997 and 1998 were renewed with an effective date of January 1, 2003. In addition DEQ issued four new Title IV Acid Rain Operating Permits in FY 2001, five in FY 2002, and nine in FY 2003.

C. General Permits

As was discussed in the introductory section of this report, DEQ is in the early stages of developing general permits for air emissions from selected activities. The general permit provides a streamlined means for permitting standardized minor source operations that do not require case-by-case analyses and permit conditions. The general permit falls under the Minor NSR category.

The Nonmetallic Mineral Processing General Permit came into effect on December 2, 2002 and is, so far, the only air emissions general permit available from DEQ. During FY 2003 eight Nonmetallic Mineral Processing General Permits were issued

VI. Issues in Air Permitting

A. Title V Deadlines

As discussed previously, a federal deadline of December 1, 2003 was imposed on DEQ to complete processing of 303 Title V permit applications.[14] These applications constitute the initial batch of submissions from calendar year 1998. As of the end of FY 2003, 241 of these applications had been processed and permits issued.

DEQ is working hard to meet the deadline although the processing of some applications has been delayed due to applicant-specific complications such as compliance issues that have not been fully resolved or complex issues related to protection of confidential business information.

While working to complete processing of the initial batch of Title V applications, the agency is also facing new applications that were not part of the initial batch as well as renewals of initial batch permits issued in 1998.

B. Designation and Redesignation of Nonattainment Areas

A five-county and five-city area of Northern Virginia closest to Washington, DC was redesignated from "serious" to "severe" nonnattainment for ozone in March 2003. This redesignation lowers the major source threshold from 50 tons per year of NOx and VOCs to 25 tons per year. The lower threshold means that smaller sources will be subjected to Major Nonattainment Area and Title V permitting requirements.

Under the new 8-hour ozone NAAQS, several other areas of the Commonwealth may be designated as nonattainment areas for ozone.[15] These include the areas encompassing Fredericksburg, Hampton Roads, the Northern Shenandoah Valley (Frederick County and

[14] Actually there were approximately 340 initial batch applicants, however a number of applications were withdrawn and other sources accepted enforceable limitations on operations to qualify themselves as "synthetic minor" sources under the State Operating Permit program.

[15] See http://www.deq.state.va.us/air/status.html for a map of recommended ozone nonattainment designations.

City of Winchester), Richmond, Roanoke, and the Shenandoah National Park. However, the Roanoke and Northern Shenandoah Valley regions are proposing early action compacts to implement emissions reductions that may forestall nonattainment designation. Areas that do become designated as nonattainment for ozone may be subjected major source thresholds lower than 100 tons per year for NOx and VOCs.

C. Reasonably Available Control Technology (RACT)

The redesignation of Northern Virginia's nonattainment status has also affected the applicability of RACT standards. In March 2003, the potential-to-emit (PTE) threshold for application of RACT standards was lowered from 50 tons per year to 25 tons per year for NOx. The RACT threshold for VOCs had already been 25 tons per year and was unchanged by redesignation.

The changed RACT applicability requires DEQ to submit state implementation plan (SIP) revisions to EPA by March 1, 2004. DEQ identified more than 40 candidate NOx RACT sources that potentially could be affected by the changed PTE threshold. Many of these sources decided either to meet "presumptive" RACT limits or to avoid RACT by electing to take a PTE limit of less than 25 tons per year.[16] This has reduced the number of sources for which DEQ must submit a SIP revision to six or fewer. The DEQ Northern Virginia Regional Office is working with these sources to meet the SIP submittal deadline.

D. NOx SIP Call and NOx Emission Trading

In 1998 the EPA determined that air pollution sources in 22 states and the District of Columbia were making significant contributions to nonattainment of the ozone NAAQS in downwind states. EPA required the upwind states, including Virginia, to revise their SIPs to reduce NOx emissions contributing to NAAQS nonattainment in the downwind states.[17]

The EPA rule, called the NO_X SIP Call Rule (40 CFR 51.121), establishes statewide NO_X emission budgets that states must achieve by the 2007 ozone season. It also establishes that fossil fuel burning EGUs with over 25 MWe nameplate capacity and fossil fuel burning non-EGUs rated at over 250 million Btu per hour heat input capacity as the categories of air pollution sources to be covered by the NO_x budget.

Part of Virginia's response to the NOx SIP Call was to develop a NOx emission trading regime applicable to EGUs and large non-EGU boilers.[18] The approved NOx allowance allotments for Virginia was published on May 31, 2002. After appropriate rulemaking

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[16] Presumptive RACT refers to predefined RACT limits for specified sources as established in Virginia regulations. See 9 VAC 5-40-311 C.

[17] See http://www.deq.state.va.us/air/planning/noxsip.html for more detailed discussion of the DEQ response to the NOx SIP Call.

[18] Details of NOx emission allowance allocations, cap levels and allowance availability, trading mechanisms, and other particulars are beyond the scope of this document.

and public notice, Virginia's NOx trading regulations came into effect on July 16, 2002 as 9 VAC 5 Chapter 140.

While the EPA will set up and supervise the NOx allowance-trading accounting system, the states are responsible for administering pertinent permitting measures as well as providing inspection and audits of continuous emissions monitors (CEMs) required by most participating sources.

Virginia's regulations require applicable sources to apply for a NOx Trading Budget permit. This permit is not a separate document but is instead incorporated into the relevant federal (Title V) or state operating permit. As of May 1, 2003, 42 separate facilities operating 148 emissions units (NOx budget units) had submitted applications.

In addition to incorporating NOx Trading Budget permit conditions into operating permits, DEQ permitwriters are including provisions related to CEMs and other monitoring, reporting, and record keeping measures necessary for implementation of NOx emission trading.

The deadline for initiation of the NOx Budget Trading Program is May 31, 2004.

E. Dominion Virginia Power Consent Decree

In Fall 2003 the United States District Court for the Eastern District of Virginia anticipates finalizing a consent decree requiring Dominion Virginia Power (operating as Virginia Electric and Power Company) to, among other things, implement pollution control projects affecting 20 EGUs at seven Virginia and one West Virginia locations. These pollution control projects will bring about significant reductions in SO2, NOx, and particulate matter emissions.

The consent decree is a result of a lawsuit by the EPA and the States of New York, New Jersey, Connecticut, Virginia, and West Virginia that alleged violations of PSD regulations.

Implementation of the consent decree conditions will require DEQ to incorporate new emissions limitations in the permits of the affected EGUs. A regulatory challenge that arises from the consent decree is a provision allowing intra-company trading or offsetting of emissions allowances among the affected EGUs. This trading provision is separate from the national SO_2 emissions trading program and Virginia's emerging NO_x trading regime. Another complication is that the intra-company trading or offsets straddle state borders (one of the affected Dominion Virginia Power facilities is in West Virginia).

F. Changes to Virginia's Minor NSR Regulations

Regulations governing the NSR program were amended on September 1, 2002, with 9 VAC 5-80-1100 *et seq*. replacing 9 VAC 5-80-10 and 11. These amendments introduced a number of changes pertinent to minor NSR permitting, including:

- An increased emphasis on net plant-wide changes in emissions over individual unit emissions in determining whether a modification of a plant requires an NSR permit,
- Simplified descriptions of exemptions from minor NSR permitting,
- General permit provisions (discussed elsewhere in this report),
- Formalized procedures for amending permits, and
- Provisions for permitting pollution control projects at major stationary sources.

G. New Federal NSR Rules

In December 2002 the EPA finalized a NSR rule with several major provisions:[19]

- ***Plantwide Applicability Limits (PALs)***--This provision allows facilities to adopt site-wide emission caps. This would give facilities the flexibility to modify their operations without undergoing New Source Review, so long as the modifications do not cause plantwide emissions to exceed the cap.
- ***Pollution Control and Prevention Projects***--This provision allows facilities to pursue specified pollution control and prevention projects upon notification of the state permitting agency rather than having to apply for and receive an NSR permit. The provision applies only to listed pollution control and prevention technologies. Applicability to other technologies requires case-by-case determination.
- ***Clean Unit Provision***--This provision encourages installation of state-of-the art pollution controls by allowing EPA to recognize plants' attainment of a "clean unit" status. Such facilities may be given regulatory flexibility in the future if they remain within their permitted limitations. The flexibility is an incentive for facilities to adopt (and have incorporated into permit conditions) best available pollution controls that are more stringent than would otherwise be required.
- ***Emissions Calculation Test Methodology***--This provision allows non-EGU facilities to choose emissions rates from any consecutive 24-month period over the previous 10 years to determine the facility's baseline emissions. (Another rule for EGUs limits to the previous five years the choice of a consecutive 24-month period for establishing baseline emission rates.) Determination of baseline emissions rates is important for determining when modifications to facilities may be significant enough to trigger New Source Review.

Virginia air pollution control regulations need to be amended to be consistent with the new federal NSR rules no later than December 31, 2005.

[19] More detail on this rule, the more recent August 2003 rule regarding "routine replacement," and NSR provisions generally can be found at http://www.epa.gov/nsr/ .

H. Hazardous Air Pollutant Issues

1. MACT

As authorized by the 1990 Clean Air Act Amendments, EPA developed technology- and performance-based maximum achievable control technology (MACT) standards that apply to a variety of industrial activities. These standards are incorporated into the air emissions permits of pertinent facilities.

During state FY 2003 the EPA promulgated 20 MACT standards affecting an estimated 57 Virginia sources (see table 11). Fifty MACT standards were already in effect previously.[20]

Table 11. MACT Standards Promulgated During FY 2003

Asphalt Processing and Asphalt Roof Manufacturing	Paper and Other Web Coating
Brick and Structural Clay Products Manufacturing	Polyvinyl Chloride and Copolymers Production
Clay Ceramics Manufacturing	Printing, Coating, and Dyeing of Fabrics and Other Textiles
Coke Ovens: Pushing, Quenching, and Battery Stacks	Refractory Products Manufacturing
Engine Test Cells and Stands	Reinforced Plastic Composites Production
Flexible Polyurethane Foam Fabrication Operations	Rubber Tire Manufacturing
Friction Materials Manufacturing Facilities	Surface Coating of Large Appliances
Hydrochloric Acid Production	Semiconductor Manufacturing
Integrated Iron and Steel Manufacturing	Surface Coating of Metal Furniture
Municipal Solid Waste Landfills	Surface Coating of Wood Building Products

2. Residual Risk

Although MACT represents strict levels of emission controls, Congress recognized that even with full implementation of the MACT program risks from toxic air pollutants would not diminish to zero.

To that end Congress created a "residual risk" program intended to:

- assess any risks remaining after MACT standard compliance;
- determine if additional emission reductions are necessary and, if so, for which MACT categories;
- set a standard that protects the public with an "ample margin of safety"; and,
- set a more stringent standard, if necessary, taking into account cost, safety, and other relevant factors, to prevent adverse environmental effects.

[20] The number of MACTs reported here are based source categories, not Subparts in the federal regulations.

EPA intends to follow a two-tiered approach for human health and ecological risk assessment. The first tier is a screening analysis using existing data along with conservative assumptions. (With respect to human health, if the excess cancer risk is no more than one in a million and the non-cancer hazard index is 0.2 or less no additional regulation will be considered.) If the screening analysis does not conclusively exclude a source, a second tier analysis will be undertaken. The second tier will evaluate the potential exposure with a more detailed analysis including an uncertainty review to evaluate whether an "ample margin of safety" will be met.

EPA plans to publish two guidance manuals (Volume 1--Overview of Air Toxics Risk Assessment and Volume 2--Site-Specific Risk Assessment Guidance) by January 1, 2004. A third document will follow (Volume 3--Community-Scale Risk Assessment) at a later date.

The residual risk program is at too early a stage to predict its possible impacts on future HAP standards and permitting regulations and procedures.